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REMARKS

Claims 1-8, 10-19, 21-26, 28-34, and 36-38 are currently pending in the subject application, and are presently under consideration. Claims 1, 10, 22, 29, and 34 have been amended herein to incorporate the subject matter of claims 9, 20, 27, 30, and 35, respectively. Accordingly, claims 9, 20, 27, 30, and 35 have been canceled without prejudice or disclaimer. Favorable reconsideration of the application is requested in view of the comments below.

I. Rejection of Claims 1, 5, 9-11, 15, 17-19, 22, 23, 25, 26, 29-30, and 32-38 Under 35 U.S.C. §102(b)

Claims 1, 5, 9-11, 15, 17-19, 22, 23, 25, 26, 29-30, and 32-38 stand rejected under 35 U.S.C. §102(b) as being anticipated by Blesener, *et al.* (U.S. 5,121,988). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons.

Applicable Law

For a prior art reference to anticipate, 35 U.S.C. §102 requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (quoting *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" *Id.* (quoting *Continental Can co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991)).

"Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Mehl/Biophile Int'l Corp. v. Milgraum*, 192 F.3d 1362, 1365, 52 USPQ2d 1303, 1305 (Fed. Cir. 1999), reh'g denied, 1999 U.S. App. LEXIS 31386 (Fed. Cir. Oct. 27, 1999) (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)).

"In addition, the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

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Claim 1, from which claims 5 and 9 depend from, has been amended by incorporating the subject matter of claim 9 therein. Thus, claim 9 has been canceled without prejudice or disclaimer, thereby rendering the rejection against claim 9 moot.

In particular, claim 1 has been amended to include an alarm system which sends an alarm if the contaminated particle count exceeds a predetermined threshold. The Examiner contends that Blesener *et al.* discloses the alarm system as described in amended claim 1 of the present invention. Applicants respectfully disagree.

The Examiner references figure 2 in Blesener *et al.* for calibration threshold levels to imply that the calibration threshold levels shown in figure 2 of Blesener *et al.* disclose an alarm system which sends an alarm if the contaminated particle count exceeds a predetermined threshold as claimed in the present invention. Contrary to the Examiner's contention, Blesener *et al.* fails to disclose such an alarm system as described herein in the claimed invention. Rather, Blesener *et al.* merely discloses calibration threshold blocks 103-107 which provide selectively larger channel viewing. Because Blesener *et al.* fails to disclose each and every element of the claimed invention, Blesener *et al.* does not anticipate claim 1, and claims 5 and 9 which depend therefrom, of the present invention.

Claims 10 and 22 have been amended herein by incorporating the subject matter of claims 20 and 27, now canceled, respectively. In particular, claims 10 and 22 have been amended to further describe the at least one laser as including a first laser located at a first height and a second laser located at a second height and the at least one detector includes a first detector located at the first height and adapted to receive light from the first laser and a second detector at the second height adapted to receive light from the second laser. Blesener *et al.* does not disclose the at least one laser including the first and second lasers as described above in amended claims 10 and 22. Claims 11, 15, 17-19, 23, 25, and 26 depend from claims 10 and 22 respectively. Since Blesener *et al.* fails to teach each and every element of the claimed invention, Blesener *et al.* does not anticipate claims 10 and 22 and the claims which depend therefrom in the present invention.

Claims 29 and 34 have been amended herein by incorporating the subject matter of claims 30 and 35, now canceled, thereby rendering the rejection against claims 30 and 35 moot. In particular, claims 29 and 34 have been amended to include a means for exhausting the contaminated particles from the chamber and to include a step of exhausting the contaminated particles from the chamber when the particle count exceeds a predetermined level, respectively. The Examiner asserts that

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because Blesener *et al.* teaches that the detection system is used for measuring the particles of aerosol flow moving through the inspection area, that an exhaust fan communicating with the chamber and an exhaust controller, as described in the claimed invention, are inherent in the Blesener *et al.* system (Paper No. 3, p. 2, ¶2). Applicants respectfully disagree.

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (quoting *Continental Can co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991)). Blesener *et al.* merely involves a method of detection and an apparatus for the detection. It does not disclose or even suggest that its method of detection includes or could include a method or system for removing the particles. Rather, Blesener *et al.* simply involves a particle counter which utilizes light extinction and two oppositely opposed cylindrical mirrors. Therefore, the teachings of Blesener *et al.* fail to make clear that the step of exhausting the contaminated particles from the chamber and the means for exhausting are necessarily present in Blesener *et al.*

Furthermore, Applicants respectfully assert that the Examiner is basing his inherency argument on that it would have been possible or probable to exhaust the contaminants, as described in the present invention, by or from the disclosure of Blesener *et al.* However, the Federal Circuit has held that it is improper to base inherency on a mere probability or possibility. That is, "the mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Mehl/Biophile Int'l Corp. v. Milgraum*, 192 F.3d 1362, 1365, 52 USPQ2d 1303, 1305 (Fed. Cir. 1999), reh'g denied, 1999 U.S. App. LEXIS 31386 (Fed. Cir. Oct. 27, 1999) (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)).

"In addition, the reference must be enabling and describe the applicant's claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994). For the aforementioned reasons, Blesener *et al.* does not enable and describe the applicant's claimed invention to the degree required by the courts. On the contrary, Blesener *et al.* fails to disclose and teach the step of exhausting... such that one of ordinary skill in the art would not have had possession of the present invention by the disclosure of Blesener *et al.*

In view of the foregoing, the present invention is not anticipated by Blesener *et al.* Thus, the

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rejection should be withdrawn.

II. Rejection of Claims 2-4, 6-8, 12-14, 16, 20-21, 24, 27-28, and 31 Under 35 U.S.C. §103(a)

Claims 2-4, 6-8, 12-14, 16, 20-21, 24, 27-28, and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Blesener *et al.* in view of Zinner (U.S. 3,591,290). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons.

Claims 20 and 27 have been cancelled herein without prejudice or disclaimer, thereby rendering the rejection against them moot. The remaining rejected claims depend from independent claims 1, 10, 22, 29 and 34, respectively, all of which have been amended as indicated and discussed above. Thus, for the reasons discussed with respect to claims 1, 10, 22, 29 and 34, claims 2-4, 6-8, 12-14, 16, 21, 24, 28, and 31 would not have been obvious to one of ordinary skill in the art in view Blesener *et al.* and Zinner.

In addition to the aforementioned reasons, the cited combination would not have rendered the present invention obvious to one of ordinary skill in the art. The Examiner intimates that Zinner is in the same field of endeavor as Blesener *et al.* (Paper No. 3, p. 3, ¶4), and thus argues that Zinner cures the deficiencies of Blesener *et al.* Applicant respectfully disagrees.

To rely on a reference under 35 U.S.C. §103, it must be analogous prior art. Zinner relates to a urological apparatus and method for analyzing a urine stream in order to obtain diagnostic information. Blesener *et al.* relates to a particle counter and method for detecting single particles in an aerosol flow. One of ordinary skill in the art would not been motivated by Blesener *et al.* to look to Zinner in order to perform the present invention because Zinner is not analogous art with respect to Blesener *et al.*

Assuming arguendo that Zinner is analogous art with respect to Blesener *et al.* and the claimed invention, the cited combination still fails to make the claimed invention obvious. To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable

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expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Blesener *et al.* provides no teaching or suggestion to be modified by replacing its beam source 110 and detection means 60 with Zinner's fiber optics array transmitter 16 and receiver 18 in order to perform the claimed invention.

Furthermore, with respect to claim 4, the Examiner contends that it would have been obvious to replace the fiber array of Zinner by a beam splitter for the purpose of splitting different light rays into the chamber. Zinner fails to teach or suggest such a modification. Regarding claims 9, 16, and 31, the Examiner states that it would have been obvious to include an alarm system indicator in Blesener *et al.* to alert the operator when the contaminated particle count exceeded a predetermined threshold. However, Blesener *et al.* fails to teach or suggest such a modification. Concerning claims 21 and 28, the Examiner argues that it would have been obvious to use the basic device of Blesener *et al.* for detecting particles in a cup because the device would function in the same manner. Again, Blesener *et al.* fails to teach or suggest such modification nor provides such motivation to modify its invention in the manners proposed by the Examiner.

With respect to at least claims 4, 9, 16, 21, 28, and 31, it appears that the rationale proffered to combine such teachings is to achieve benefits identified in applicants' specification, to overcome problems associated with conventional methods, etc. Applicants respectfully submit that this is an unacceptable and improper basis for a rejection under 35 U.S.C. §103. In essence, the Examiner is basing the rejection on the assertion that it would have been obvious to do something not suggested in the art because so doing would provide advantages stated in Applicants' specification. This sort of rationale has been condemned by the CAFC; see, for example, *Panduit Corp. v. Dennison Manufacturing Co.*, 1 USPQ2d 1593 (Fed. Cir. 1987).

The prior art items themselves must suggest the desirability and thus the obviousness of making the combination without the slightest recourse to the teachings of the patent or application. Without such independent suggestion, the prior art is to be considered merely to be inviting unguided and speculative experimentation which is not the standard with which obviousness is determined. *Amgen, Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir. 1991); *In re Laskowski*, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989); *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988); *Hodosh v. Block Drug*, 786 F.2d at 1143 n. 5., 229 USPQ at 187 n. 4.; *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed.

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Cir. 1985).

Regarding claims 20 and 27, the subject matter of which have been incorporated into claims 22 and 29, respectively, the Examiner has failed to establish a *prima facie* case of obviousness because the Examiner has failed to show any of the three basic criteria. For this additional reason as well as the aforementioned reasons stated above, the present invention as claimed would not have been obvious to one of ordinary skill in the art at the time the invention was made. Moreover, no motivation exists to combine Blesener *et al.* with Zinner to perform the present invention.

III. Conclusion

The present application is believed to be condition for allowance in view of the above amendments and comments.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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MARKED UP VERSION OF AMENDED CLAIMS

Please cancel claims 9, 20, 27, 30, and 35 without prejudice or disclaimer.

Please amend claims 1, 10, 22, 29, and 34 in the manner indicated below:

1. (Amended) A system for monitoring particle count in a chamber, comprising:
a system for sending light from the light source across the chamber;
a system for receiving the light; [and]
a system for determining particle count based upon interruptions in the light being received by the receiving system; and
an alarm system which sends an alarm if the contaminated particle count exceeds a predetermined threshold.
10. (Amended) A system for monitoring the contaminated particle count in a chamber, comprising:
at least one laser disposed in the chamber, the at least one laser adapted to send a ray of light across the chamber, and wherein the at least one laser includes a first laser located at a first height and a second laser located at a second height and the at least one detector includes a first detector located at the first height and adapted to receive light from the first laser and a second detector at the second height adapted to receive light from the second laser;
at least one detector disposed in the chamber, the at least one detector adapted to receive the ray of light and provide a signal corresponding to the intensity of the ray of light;
a measuring system operably coupled to the at least one detector, the measuring system adapted to receive the signal corresponding to the intensity of the ray of light and convert the signal to digital data; and
a processor operatively coupled to the measuring system, the processor adapted to receive the digital data from the measuring system and analyze the digital data wherein the difference of the intensity of the ray of light from the at least one laser to when it is received by at least one detector is proportional to the particle count in the chamber.

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22. (Amended) A system for controlling the contaminated particle count in an aerosol found in a chamber during a photoresist coating and/or development process of a semiconductor, the system comprising:

at least one laser disposed in the chamber, the at least one laser adapted to send a ray of light across the chamber, and wherein the at least one laser includes a first laser located at a first height and a second laser located at a second height and the at least one detector includes a first detector located at the first height and adapted to receive light from the first laser and a second detector at the second height adapted to receive light from the second laser;

at least one detector disposed in the chamber, the at least one detector adapted to receive the ray of light and provide a signal corresponding to the intensity of the ray of light;

a measuring system operably coupled to the at least one detector, the measuring system adapted to receive the signal corresponding to the intensity of the ray of light and convert the signal to digital data; and

a processor operatively coupled to the measuring system, the processor adapted to receive the digital data from the measuring system and analyze the digital data wherein the difference of the intensity of the ray of light from the at least one laser to when it is received by at least one detector is proportional to the particle count in the chamber;

an exhaust fan in communicative relationship with the chamber, the exhaust fan adapted to remove contaminated particles out of the chamber; and

a flow control valve controlling the exhausting level of the exhaust fan based on analyzed data received from the processor.

29. (Amended) A system for monitoring the contaminated particle count in an aerosol found in a chamber during a photoresist coating and/or development process of a semiconductor, the system comprising:

means for transmitting a ray of light across the chamber;

means for detecting the intensity of the ray of light and providing a signal corresponding intensity of the ray of light;

means for converting the signal to digital data; [and]

means for determining the particle count in the chamber from the digital data based on the change of intensity of the ray of light due to contaminated particles in the chamber; and

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means for exhausting the contaminated particles from the chamber.

34. (Amended) A method for monitoring the contaminated particle count in an aerosol found in a chamber during a photoresist coating and/or development process of a semiconductor, the method comprising the steps of:

transmitting a ray of light across the chamber;

detecting the intensity of the ray of light and providing a signal corresponding to the intensity of the ray of light;

converting the signal to digital data; [and]

determining the particle count in the chamber from the digital data based on the change of intensity of the ray of light due to contaminated particles in the chamber; and

exhausting the contaminated particles from the chamber when the particle count exceeds a predetermined level.